

1. A lithographic printing plate precursor comprising a support having a hydrophilic surface having provided thereon an image-forming layer containing a hydrophobic high molecular compound having at least either a functional group represented by formula (1) or a functional group represented by formula (2):

$$\begin{array}{ccc}
 & \bigcirc & \bigcirc \\
 & - - - \bigcirc & \bigcirc & \bigcirc & \\
 & \bigcirc & &
\end{array}$$
(1)

$$\begin{array}{ccc}
O & \bigcirc & \\
-C & O & X
\end{array} \tag{2}$$

wherein X^{\dagger} represents an iodonium ion, a sulfonium ion or a diazonium ion.

2. A lithographic printing plate precursor comprising a support having a hydrophilic surface having provided thereon an image-forming layer containing a hydrophobic infrared ray absorber having at least either a functional group represented by formula (1) or a functional group represented by formula (2):

$$\begin{array}{ccc}
 & \bigcirc & \bigcirc \\
 & - - - - \bigcirc & \times \\
 & \bigcirc & \times \\
 & \bigcirc & \times
\end{array}$$
(1)

wherein X^{\dagger} represents an iodonium ion, a sulfonium ion or a diazonium ion.

3. The lithographic printing plate precursor as claimed in claim 1, wherein the image-forming layer contains a compound having at least either a functional group represented by formula (3) or a functional group represented by formula (4):

wherein R¹ and R² each represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R³ represents an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R⁴ represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; either R⁵ or R⁶ represents a hydrogen atom and the other represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; and arbitrary two of R¹, R² and R³ may form a ring, and arbitrary two of R⁴, R⁵ and R⁶ may form a ring.

4. The lithographic printing plate precursor as claimed in claim 2, wherein the image-forming layer contains a compound having at least either a functional group represented by formula (3) or a functional group represented by formula (4):

$$\begin{array}{c}
R^{6} \\
-O \\
R^{4}
\end{array}$$
(4)

wherein R¹ and R² each represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R³ represents an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R⁴ represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; either R⁵ or R⁶ represents a hydrogen atom and the other represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; and arbitrary two of R¹, R² and R³ may form a ring, and arbitrary two of R⁴, R⁵ and R⁶ may form a ring.